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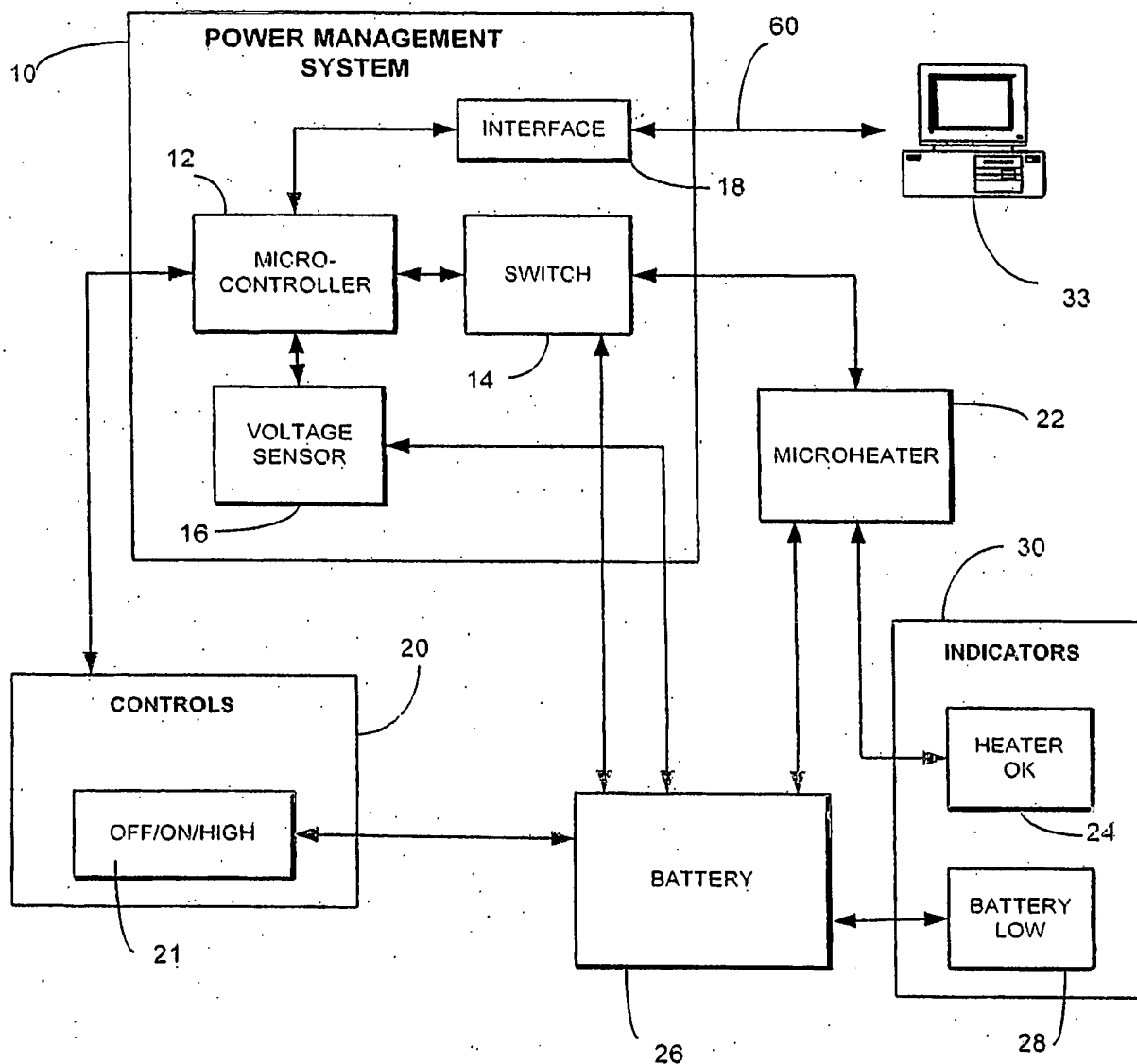


FIGURE 1

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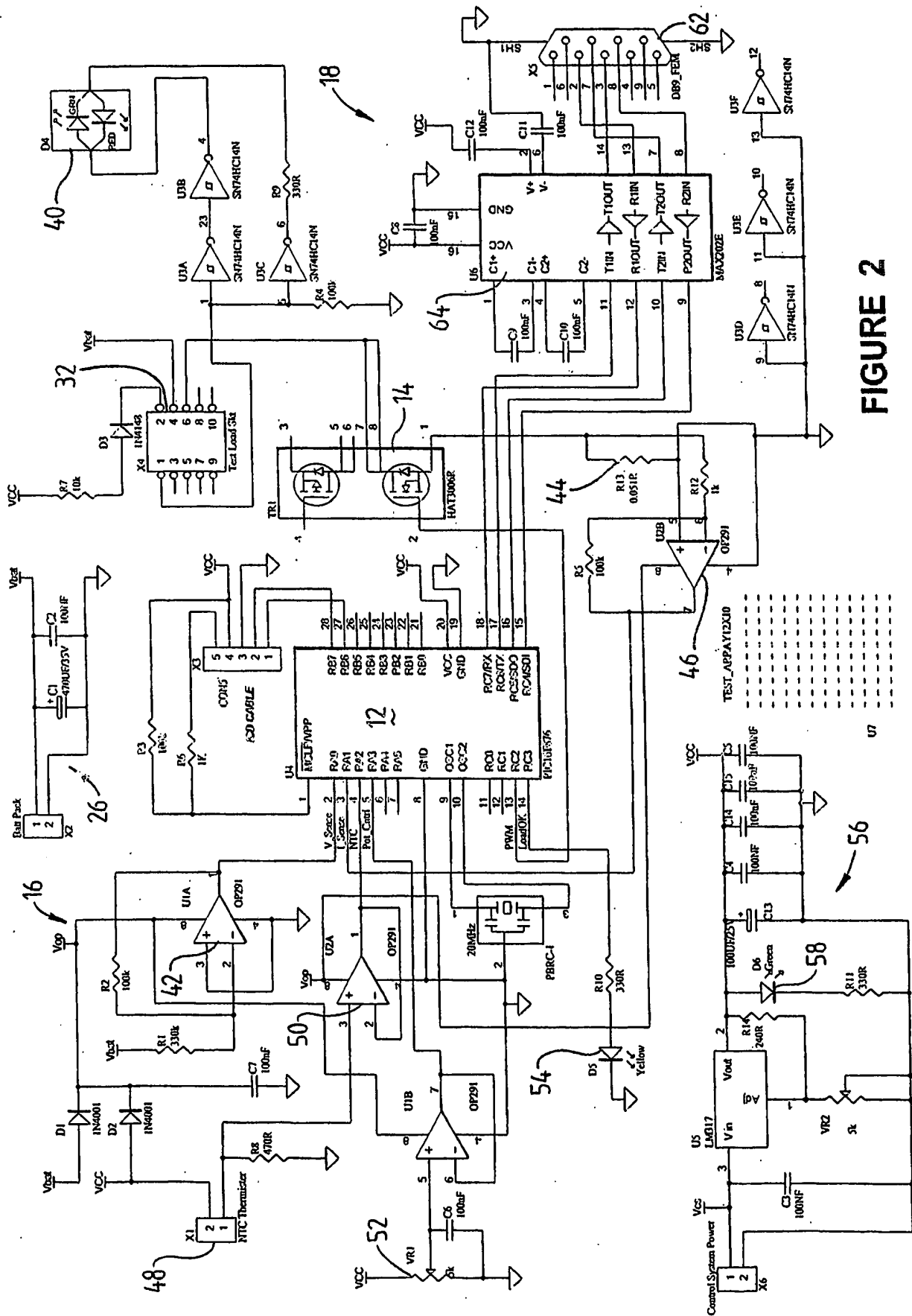


FIGURE 2

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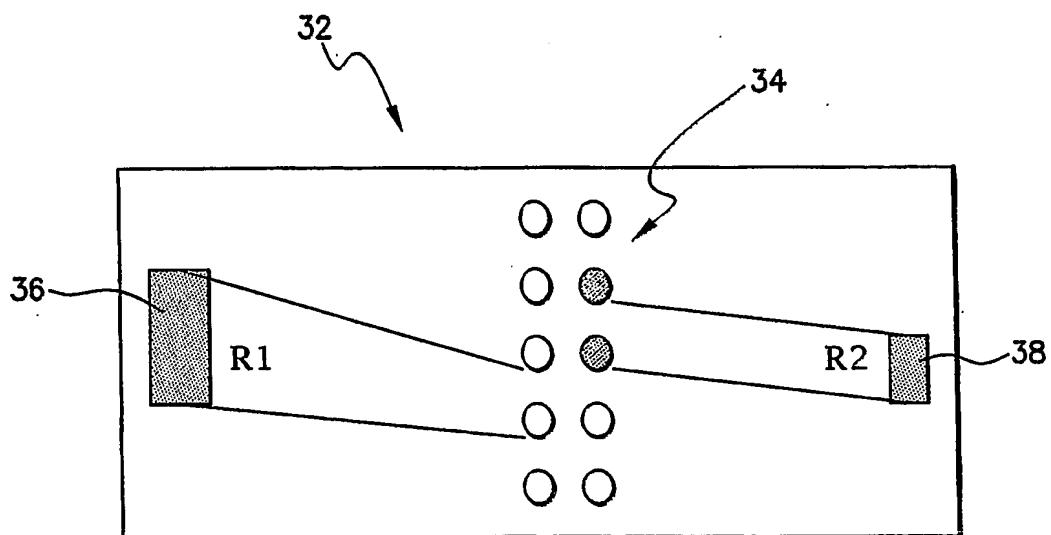
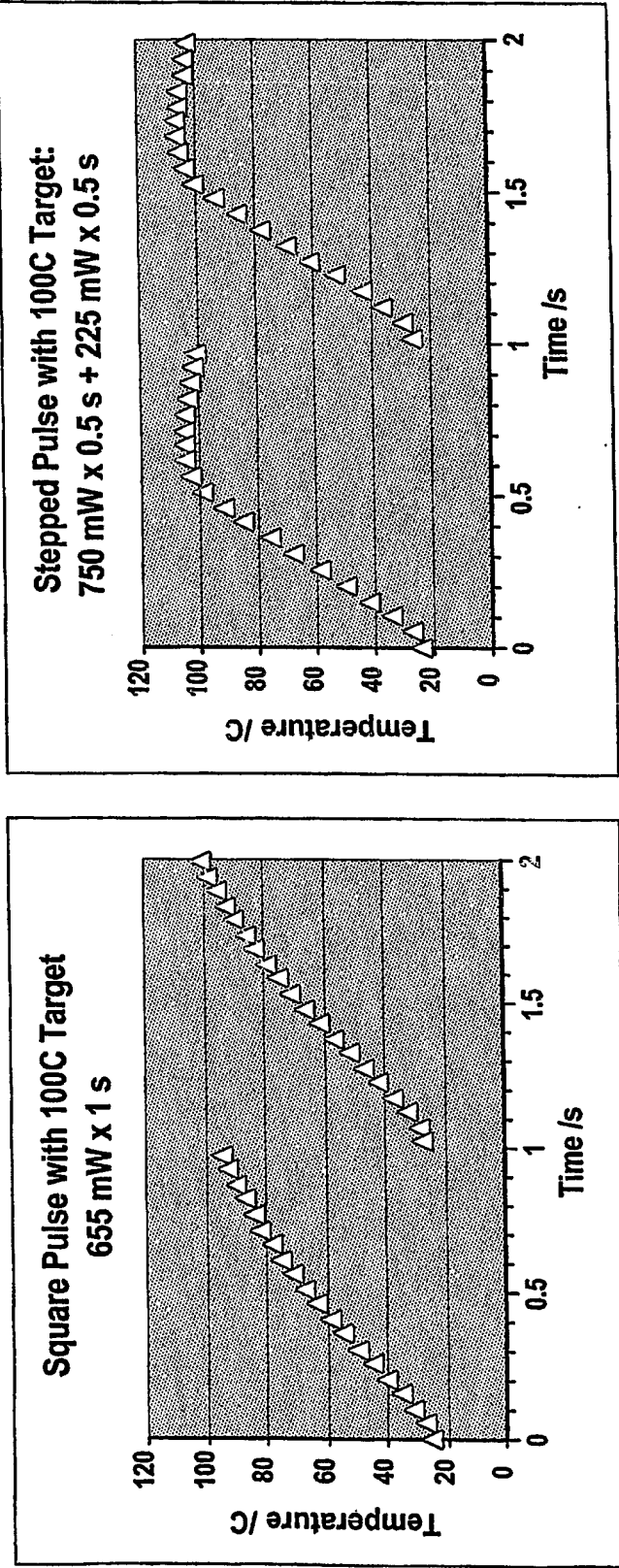


FIGURE 3

Temperature Measurements

Energy efficiency of simple and compound pulses

Target temperature 100C, duration 1s



Energy Cost: 485 mJ/pulse

Energy Cost: 655 mJ/pulse

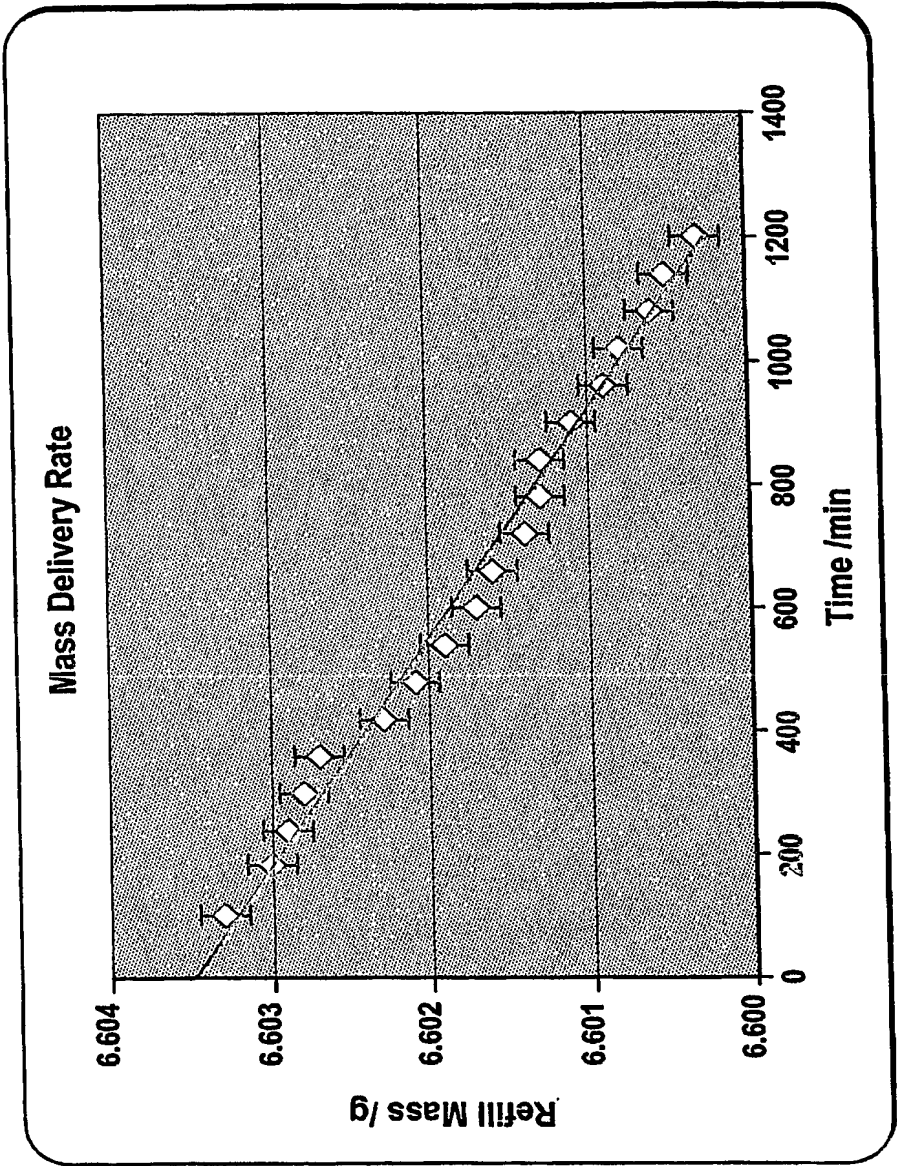
25% energy saving, temperature maintained longer

FIGURE 4

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Performance: Delivery Rates

0603
4R7
2 x AA
3V
 $T_{on} = 0.3 \text{ s}$
 $T_{pulse} = 1.7 \text{ s}$
 $T_{cycle} = 60 \text{ s}$
% Pulse = 50%
Adaptive Mode
80 μm wick
100% 51264

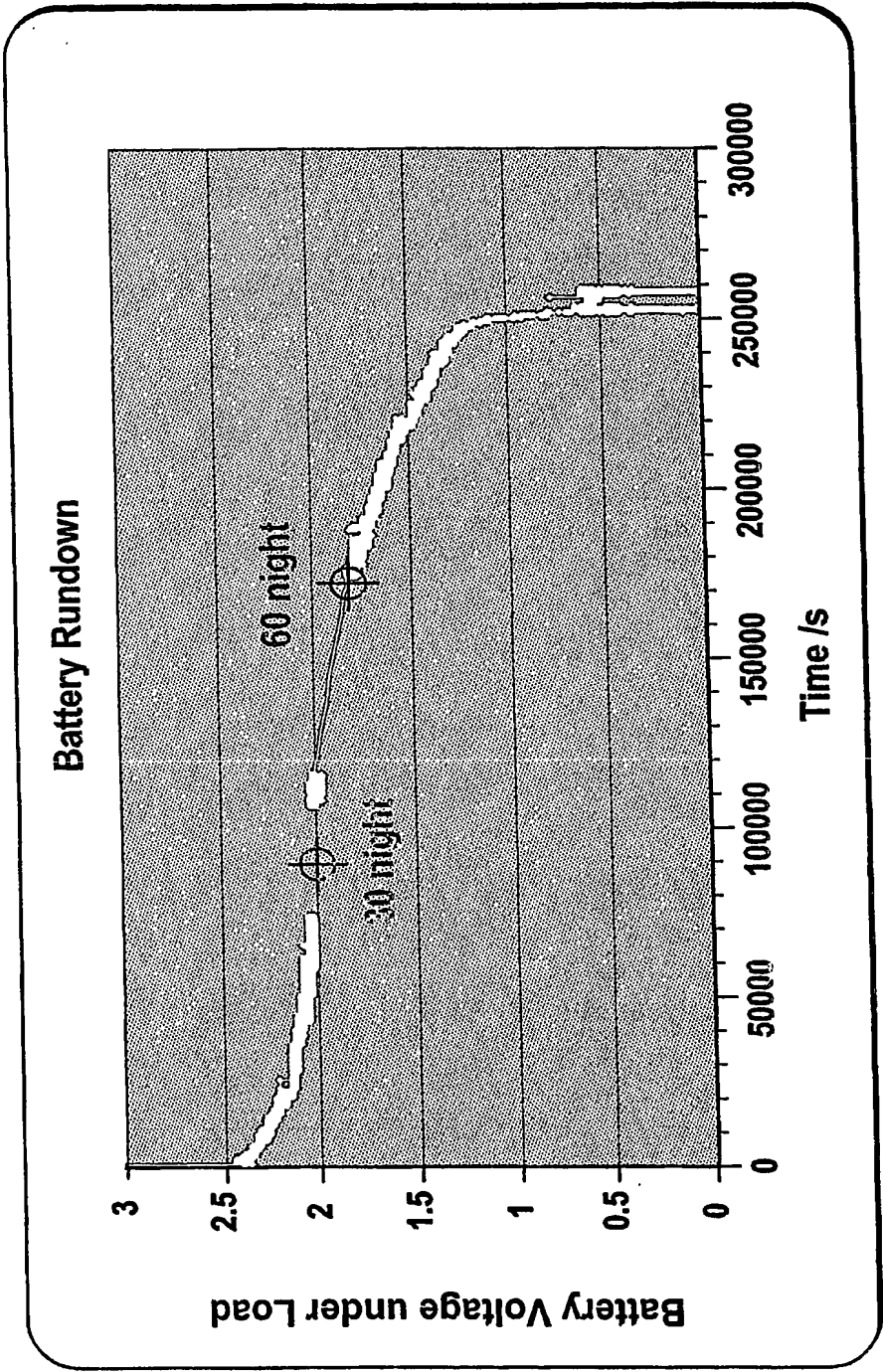


Delivery Rate = 160 $\mu\text{g/hr}$

FIGURE 5

Performance: Battery Lifetime

4R7
2 x AA
3V
 $T_{on} = 0.3\text{ s}$
 $T_{pulse} = 1.7\text{ s}$
 $T_{cycle} = 60\text{ s}$
% Pulse = 50%
Adaptive Mode



2 x AA quality alkaline batteries give
1 - 2 months performance at 50 $\mu\text{g/hr}$

FIGURE 6

Performance: Bioefficacy

0603
4R7
2 x AA
3V
 $T_{on} = 0.3\text{ s}$
 $T_{pulse} = 1.7\text{ s}$
 $T_{cycle} = 60\text{ s}$
% Pulse = 50%
Adaptive
80 μm wick
100% S1264

Micro Device - Landings and Bites
Ae. aegypti, 100% S1264 Refill, 1s x 610 mW pulses
Single Replicates

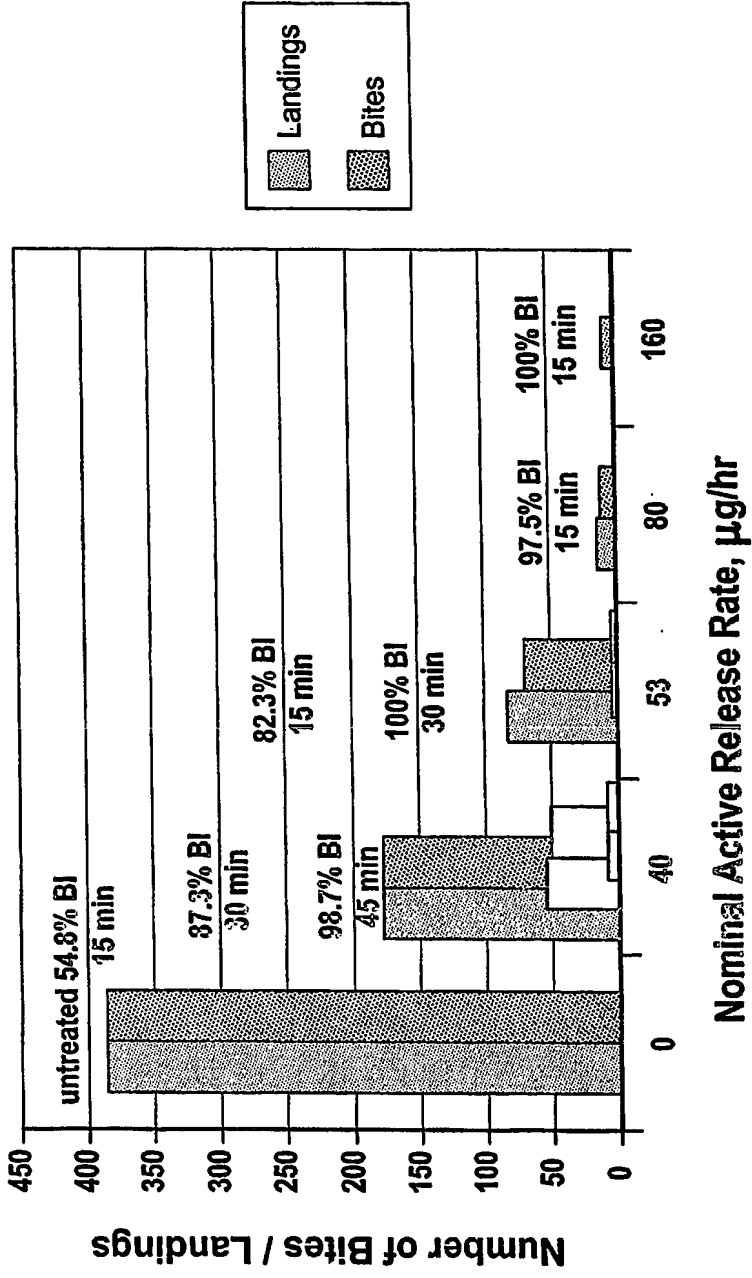


FIGURE 7
50 $\mu\text{g/hr}$ = 1 x 2s pulse per 3 min 12s
90% bite inhibition in 15 min (5 replicates)